



GREAT BASIN UNIFIED AIR POLLUTION CONTROL DISTRICT

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May 15, 2014

Jen Daugherty
Associate Planner
Town of Mammoth Lakes
P.O. Box 1609
Mammoth Lakes, CA 93546

RE: 2013-2014 Mammoth Lakes PM10 and Meteorological Summary

Dear Ms. Daugherty:

The Great Basin Unified Air Pollution Control District has monitored air quality in the Town of Mammoth Lakes since 1984. We recently finalized the data completing the 2013-2014 air monitoring year ending March 15, 2014. We are pleased to provide you this summary of air quality measurements recorded by GBUAPCD between March 16, 2013 and March 15, 2014.

During this period, federal PM10 standards ($150 \mu\text{g}/\text{m}^3$ for a 24-hour average) were exceeded on two (2) days due to wildfire smoke impacts from the Aspen Fire. State PM10 standards ($50 \mu\text{g}/\text{m}^3$ for a 24-hour average) were exceeded on fifteen (15) days. Ten (10) of these state exceedances were due to wildfire smoke impacts from the Aspen and Rim fires in July and August. The remaining five (5) exceedances were all in the month of December. Exceedance days and PM10 levels are listed in the table below.

Date	PM10 Average ($\mu\text{g}/\text{m}^3$)	Date	PM10 Average ($\mu\text{g}/\text{m}^3$)
**7/24/2013	71	**8/3/2013	75
**7/26/2013	85	**8/6/2013	54
**7/27/2013	52	**8/31/2013	102
**7/28/2013	166	*12/21/2013	53
**7/29/2013	183	*12/22/2013	54
**7/30/2013	122	*12/23/2013	57
**7/31/2013	90	*12/24/2013	53
**8/1/2013	134	*12/29/2013	51
**8/2/2013	97		

*-Denotes weekend or holiday exceedances.

** -Denotes wildfire smoke.

For comparison purposes, there were thirty-three (33) state and zero (0) federal exceedances between March 16, 2010 - March 15, 2011, five (5) state and zero (0) federal exceedances between March 16, 2011 – March 15, 2012 and nineteen (19) and zero (0) federal exceedances between March 16, 2012 – March 15, 2013. The attached graph shows daily average PM10 values during 2013 - 2014 superimposed on values from the previous three years for timing comparison purposes.

Note that all (100%) non-wildfire smoke impact days occurred on weekends or holidays during the month of December. For comparison, 8 out of 19 exceedance days (42%) in 2012-2013, 4 out of the 5 exceedance days (80%) in 2011 -2012, and 6 out of the 33 exceedance days (18%) in 2010-2011 occurred on weekends or holidays.

Meteorological conditions during elevated PM10 days are useful for interpreting these results. Prolonged periods of calm winds during the month of December coincided with elevated PM10. Wood smoke and road cinder dust associated with anthropogenic activities coupled with meteorological atmospheric inversion conditions predominately contributed to poor air quality on these calm days.

Large scale wildfires in the Mammoth Lakes area are infrequent events. The most recent fire prior the Aspen Fire impacting the community at levels surpassing the federal PM10 standard was the Rainbow fire in 1992 as shown in the attached graph. Elevated PM10 levels from wildfire smoke during the summer months of 2013 were the cause of 12 combined state and federal exceedances. These made up 71% of the total exceedance during this monitoring year. The Aspen and Rim Fire perimeters at containment are attached for general reference. Due to prevailing southerly winds during this time of year, smoke impacts to the community of Mammoth Lakes were greater from the Aspen Fire. The PM10 monitor in Mammoth only measured elevated particulate levels above the state standard from the Rim Fire on August 31, 2013. This occurred due to a change in wind direction from the north. Had the prevailing winds not been from a southerly direction during this period, smoke impacts would have been much more severe.

Please contact me with any questions you may have.

Thank you,



Theodore D. Schade
Air Pollution Control Officer

Enc.

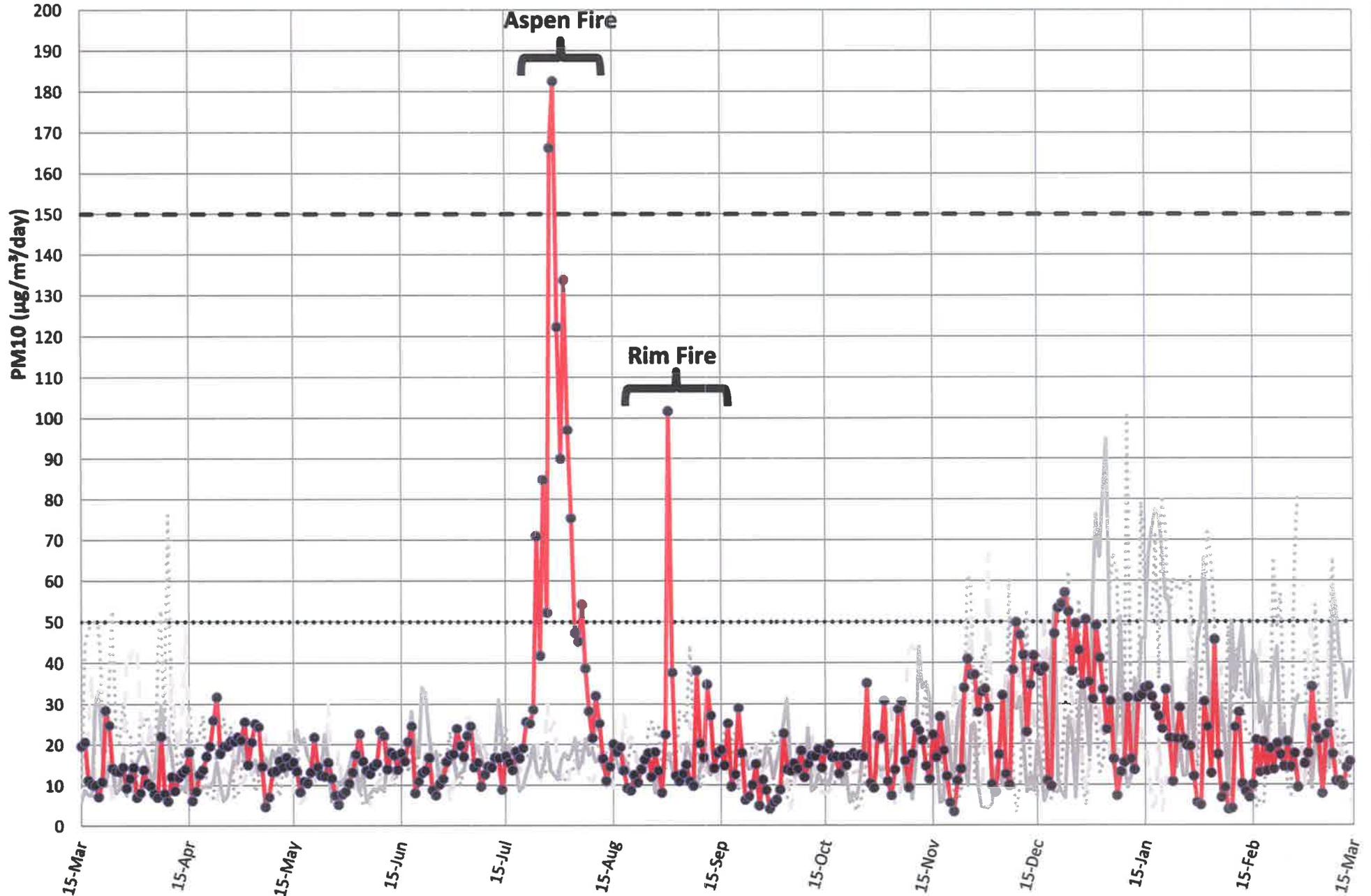
1305151
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1305155



Town of Mammoth Lakes - PM10

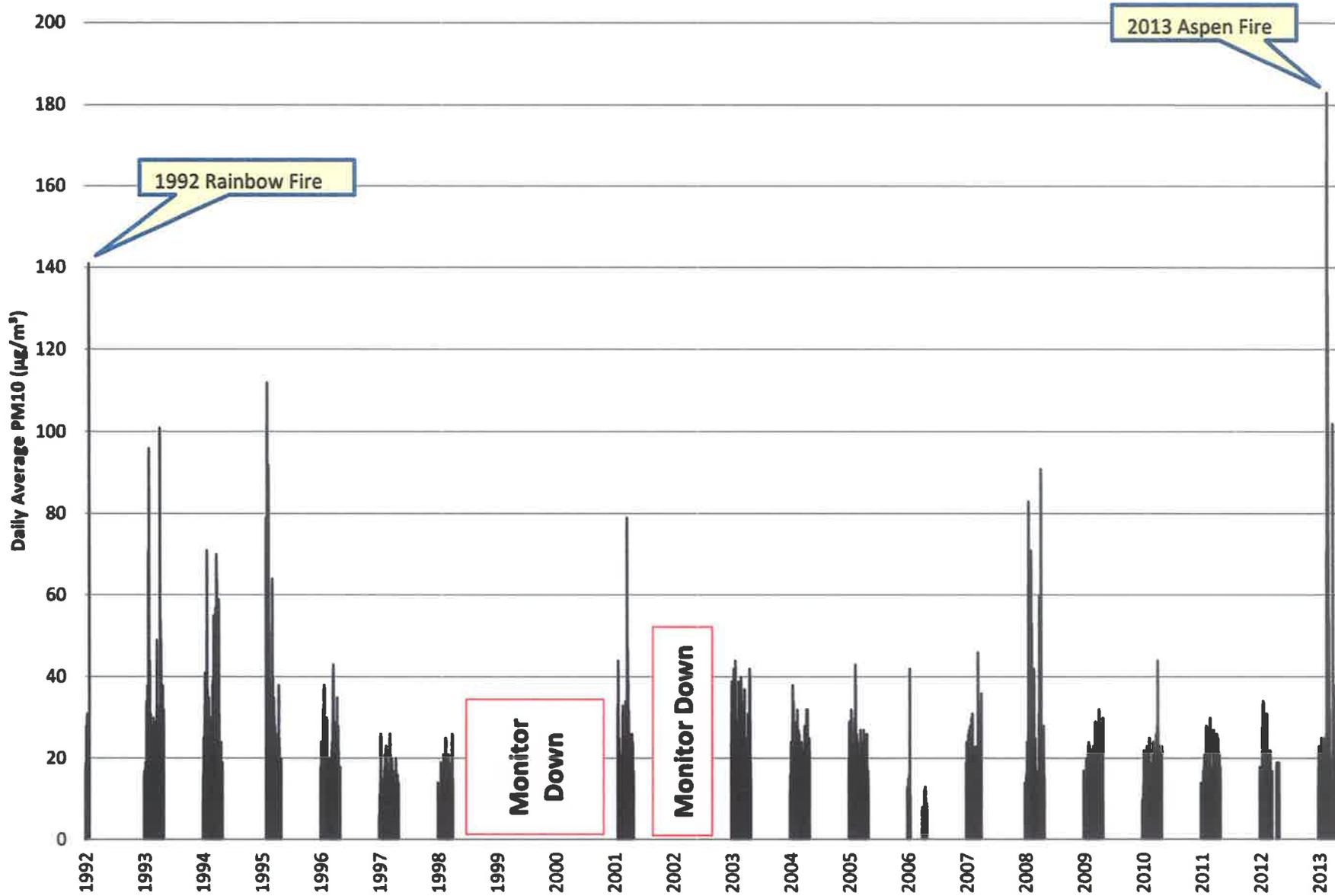
March 16, 2013 - March 15, 2014

— Federal PM10 Standard State PM10 Standard 10-11 11-12 12-13 ●— 13-14



Mammoth Lakes Wildfire Season PM10

June 1992 - October 2013



Aspen Fire Perimeter

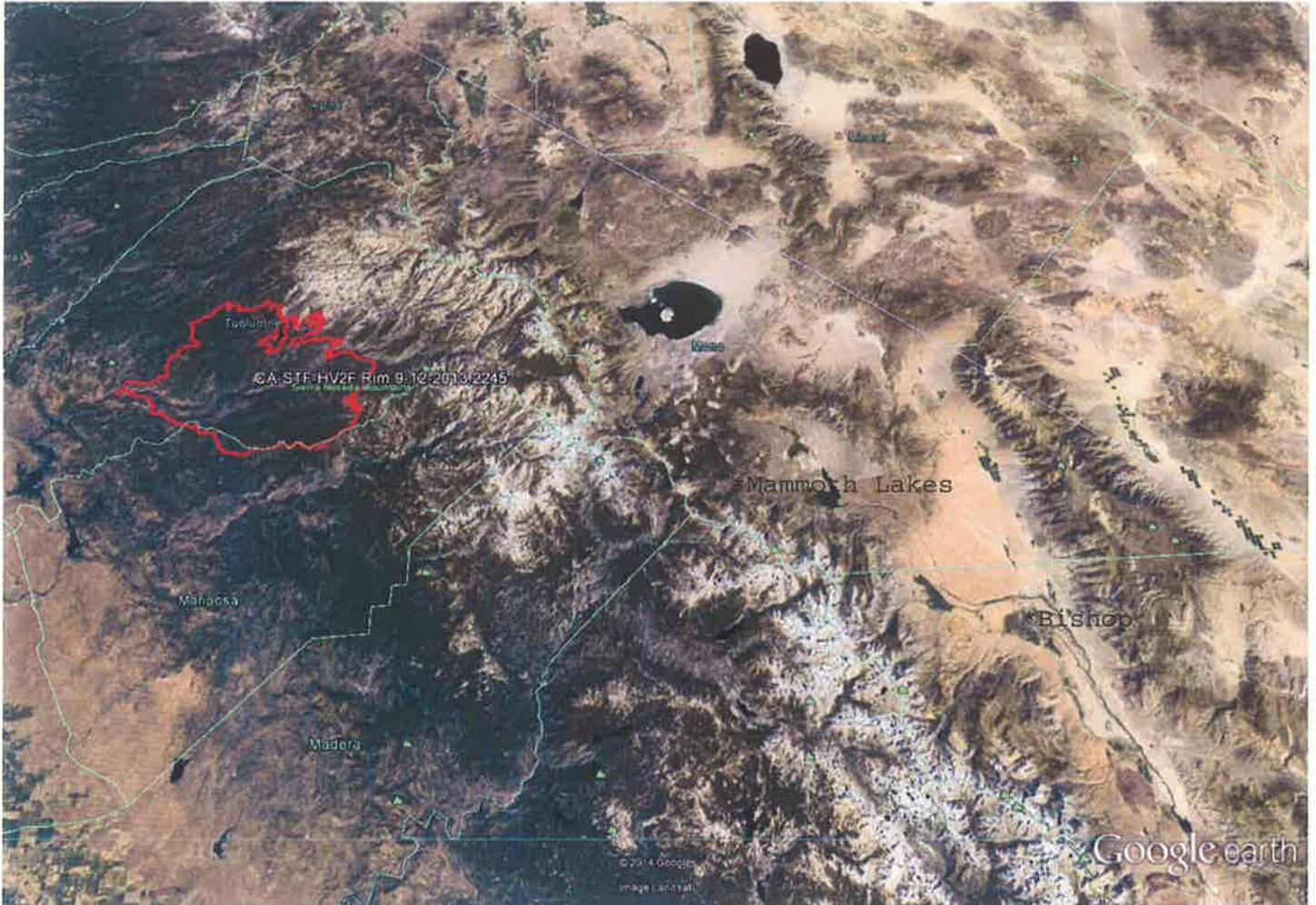


Google earth

miles 40
km 60



Rim Fire Perimeter



Google earth

miles
km



Aspen Fire affect on Mammoth Daily Average PM10 ($\mu\text{g}/\text{m}^3$)

